

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

After entry of the foregoing Amendment, Claims 1-9, 11-13, and 15-19 are pending in the present Application. Claims 1, 12 and 16 have been amended. Support for the amendment of Claims 1, 12 and 16 can be found at least on page 19, line 25 through page 20, line 8 of the specification. No new matter has been added.

By way of summary, the Official Action presents the following issues: Claims 1-9, 11-13, and 15-19 stand rejected under 35 U.S.C. § 103 as being anticipated by Marturano et al. (U.S. Patent No. 5,636,230, hereinafter Marturano) in view of Kumar (U.S. Patent No. 6,269,080).

REJECTION UNDER 35 U.S.C. § 103

The outstanding Official Action has rejected Claims 1-9, 11-13, and 15-19 under 35 U.S.C. § 103 as being anticipated by Marturano in view of Kumar.

The Official Action contends that Marturano et al. discloses all the Applicants' claim limitations with the exception determining by an information delivery apparatus, in accordance with a given standard without receiving a request for retransmission, that at least one radio terminal is predetermined, prior to transmission of a multicast information to the radio stations, as being the retransmission-permitted terminal permitted for retransmission of the multicast information. However, the Official Action recites Kumar as describing this more detailed aspect of the Applicants' invention, and states that it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the cited

references for arriving at the Applicants' claims. Applicants respectfully traverse the rejection.

By way of background, multicast transmission systems are known for distributing data to a plurality of receiving devices. In internet protocol (IP) arrangements, the router functions to collect retransmission requests of corresponding sub-networks so that overlapping retransmission information is not provided to an upstream sender. In a radio transmission environment, conventional retransmission control allows each mobile station which fails to receive a data packet, to independently send a retransmission request to the base station. Such control systems suffer in performance as increases in retransmission requests present a corresponding increase in traffic.¹

Applicants' amended Claim 1 recites, *inter alia*, a retransmission control method in a multicast service providing system in which an information delivery apparatus transmits multicast information to radio terminals within a service area of the information delivery apparatus via a radio section. Some of the radio terminals of the service area are configured to send a request for retransmission of multicast information in case of an error, while others of the radio terminals are configured not to send a request for retransmission. The method including:

(a) determining whether respective of the radio terminals within the service area is designated as a retransmission-permitted terminal permitted for retransmission of the multicast information, and determining by the information delivery apparatus, in accordance with a given standard without receiving a message or a request for retransmission from the radio terminals by the information delivery apparatus that at least one of the radio terminals is predetermined as being the retransmission-permitted terminal permitted for retransmission of the multicast information;

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¹ Application at pages 1-4.

The outstanding Office Action recognizes that Marturano et al. does not describe the step of determining by the information delivery apparatus... However, the Office Action asserts that Kumar describes this feature of the claimed invention. Moreover, it is respectfully submitted that Kumar does not describe the above-described “determining step”. Rather, Kumar describes an active receiver selection process, in which the FDSP server selects, in response to a token request message received from a number of FDSP clients, the first FDSP client that responds as the active receiver. (See e.g. step S05 in Fig. 5 of Kumar). For example, the FDSP server multicasts in step 501 an open token message directed to a subset of FDSP clients.² After all the FDSP clients receive the open token message, and respond with a token request message in step 502, the FDSP server in step S503 selects, in response to the token request messages received from the FDSP clients, the first responding FDSP client as being the active receiver.³

The invention defined by amended Claim 1, for example, requires that the information delivery apparatus determines, in accordance with a given standard without receiving a request for retransmission, that at least one of the radio terminals is predetermined prior to transmission of the multicast information as being the retransmission-permitted terminal. Moreover, the information delivery apparatus (e.g. base station) is able to determine, without receiving a NACK from the radio terminals and in accordance with a given standard (e.g. the techniques for determination as per Figs. 7-11, 12 and 14), that at least some of the radio terminals (e.g. mobile stations) are predetermined (or identified) as being the retransmission-permitted terminals.

Because Kumar does not teach the above-described “determining step”, it is respectfully submitted that Kumar does not cure the deficiencies of Marturano et al.

² See Kumar at Figure 5.

³ Kumar at Figure 5, steps 501-503.

Therefore, no matter how Kumar and Marturano et al. are combined, the combination does not teach or suggest all of the elements of amended Claim 1. Although of different statutory class, and/or scope, Claims 2-9, 11-13 and 15-19 are believed to also patentably define over the asserted prior art.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-9, 11-13 and 15-19, as amended, patentably defines over the asserted prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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